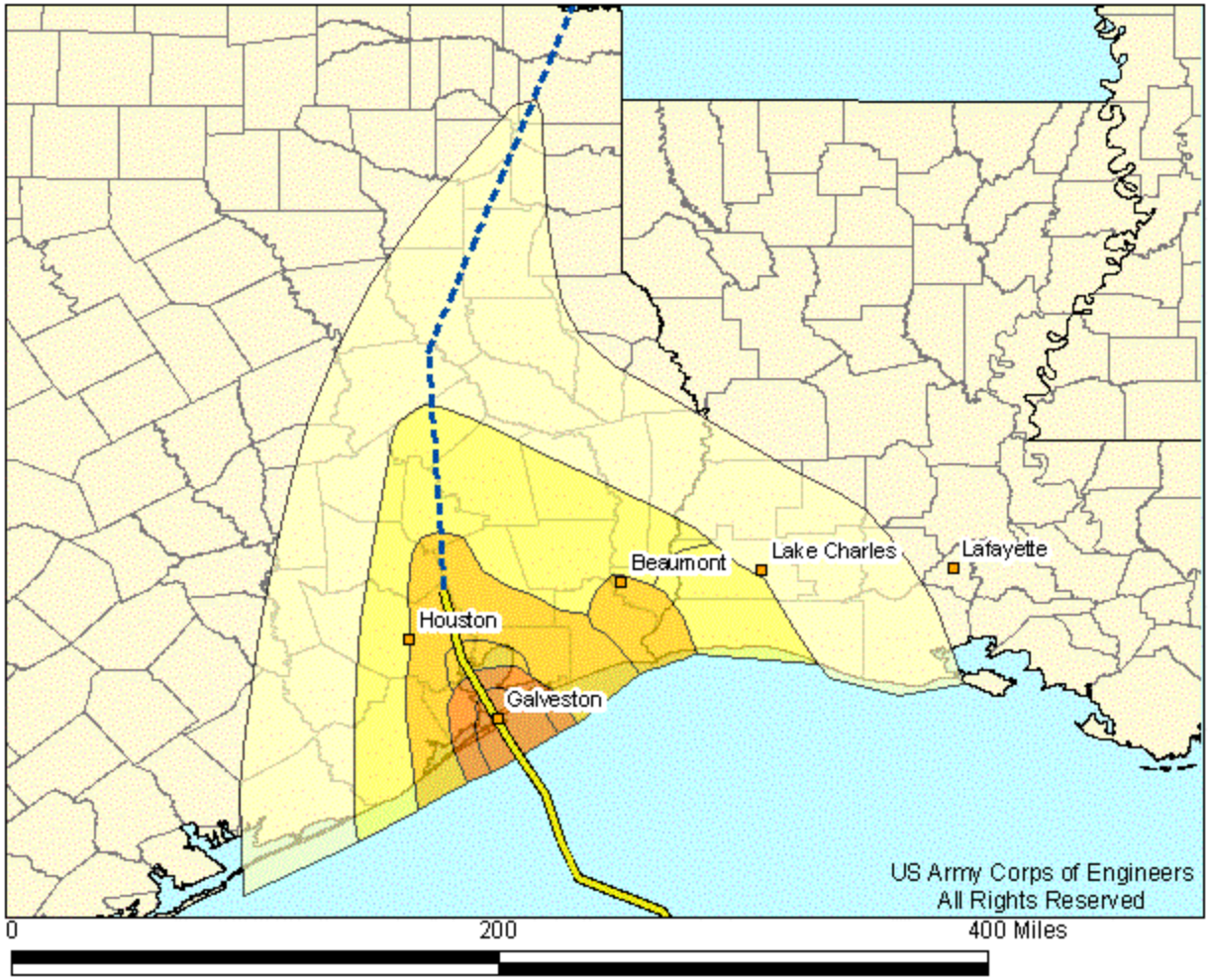
US Army Corps of Engineers

Hurricane Ike Projected Damage Areas

Landfall Plus About 4 Hours

For Planning Purposes Only!



Post Landfall Projected Damage Areas

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

Projected Damage Areas

- CAT 0-type damage
- CAT 1-type damage
- CAT 2-type damage
- CAT 3-type damage
- CAT 4-type damage
- CAT 5-type damage

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC (0500 EDT 09/13/2008) forecast.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

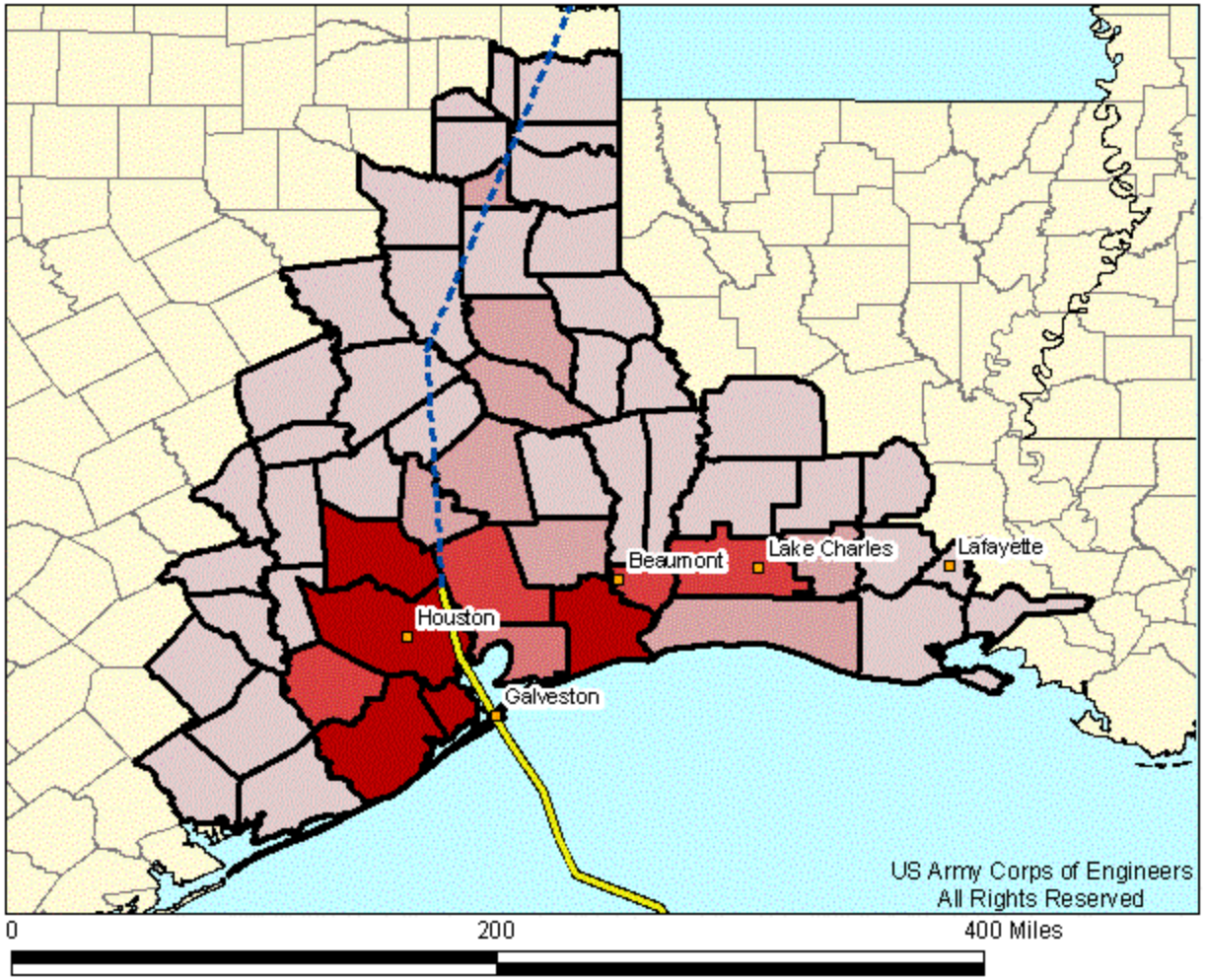
Hurricane Ike Projected Damage Areas	
Generated By: Siemsen/Deatrick, LRL 0710 EDT 09/13/2008	
Sources: HURREVAC LRL-DEBRIS	Page 1 of 14

US Army Corps of Engineers

Hurricane Ike Debris Model

Landfall Plus About 4 Hours

For Planning Purposes Only!



Post Landfall Debris Model Results

Texas - 37,022,000 Yards
Louisiana - 1,242,000 Yards

Model results per County on following page

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC (0500 EDT 09/13/2008) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Ike Debris Model

Generated By: Siemsen/Deatrick, LRL
0710 EDT 09/13/2008

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Ike Debris Model

Landfall Plus About 4 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Louisiana		Acadia	59,000
		Allen	38,000
		Beauregard	100,000
		Calcasieu	653,000
		Cameron	165,000
		Evangeline	4,000
		Iberia	< 1,000
		Jefferson Davis	126,000
		Lafayette	2,000
		Vermilion	85,000
		Vernon	10,000
Louisiana	1,242,000		
Texas		Anderson	30,000
		Angelina	114,000
		Austin	19,000
		Brazoria	1,670,000
		Brazos	< 1,000
		Camp	< 1,000
		Cass	4,000
		Chambers	453,000
		Cherokee	80,000
		Colorado	< 1,000
		Fort Bend	839,000
		Galveston	6,645,000
		Gregg	158,000
		Grimes	38,000
		Hardin	169,000
		Harris	19,144,000
		Harrison	25,000
		Henderson	< 1,000

State	Yards per State	County	Yards per County
Texas		Houston	49,000
(continued)		Jackson	< 1,000
		Jasper	87,000
		Jefferson	3,572,000
		Leon	6,000
		Liberty	731,000
		Madison	11,000
		Marion	6,000
		Matagorda	68,000
		Montgomery	1,419,000
		Morris	2,000
		Nacogdoches	101,000
		Newton	52,000
		Orange	676,000
		Panola	6,000
		Polk	168,000
		Rusk	79,000
		Sabine	9,000
		San Augustine	10,000
		San Jacinto	113,000
		Shelby	4,000
		Smith	90,000
		Trinity	62,000
		Tyler	89,000
		Upshur	25,000
		Walker	96,000
		Waller	46,000
		Washington	< 1,000
		Wharton	57,000

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Ike Debris Model

Generated By: Siemsen/Deatrick, LRL
0710 EDT 09/13/2008

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Ike Debris Model

Landfall Plus About 4 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Texas	37,022,000		
(continued)			

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Hurricane Ike Debris Model

Generated By: Siemsen/Deatrick, LRL
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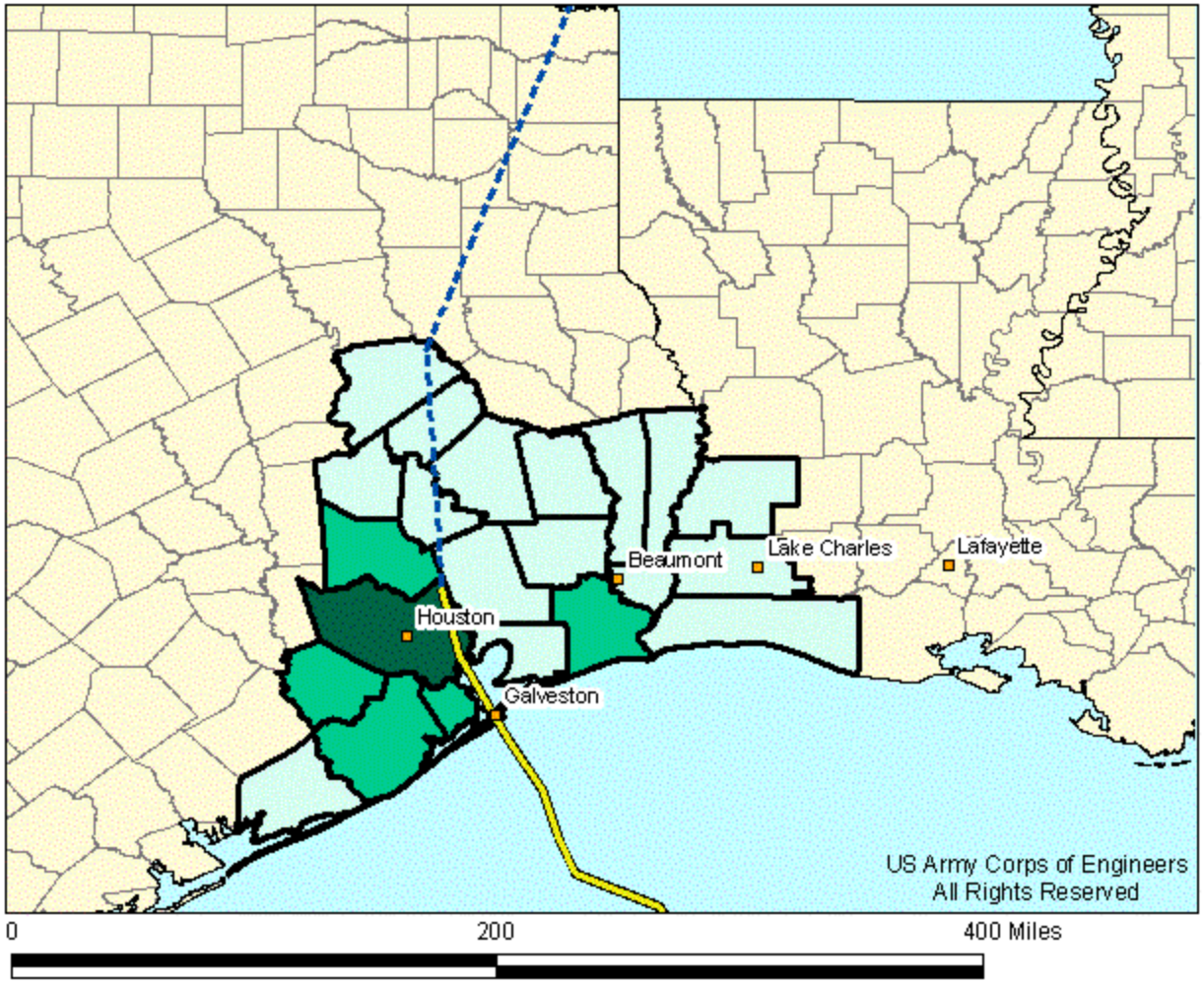
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Ike Commodities Model

Landfall Plus About 4 Hours

For Planning Purposes Only!



Post Landfall Water Model Results

Day One / Day Two / Day Three
Texas – 57/114/228 Truckloads
Louisiana – 6/6/6 Truckloads

Model results per County on following page

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

Commodities
- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC ***(0500 EDT 09/13/2008)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents single day needs with full distribution system in place and operating.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Ike Commodities Model

Generated By: Siemsen/Deatrick, LRL
0710 EDT 09/13/2008

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Ike Commodities Model

Landfall Plus About 4 Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
Louisiana		Beauregard	1
		Calcasieu	4
		Cameron	1
Louisiana	6		
Texas		Brazoria	12
		Chambers	2
		Fort Bend	11
		Galveston	12
		Hardin	3
		Harris	145
		Houston	1
		Jasper	1
		Jefferson	11
		Liberty	4
		Matagorda	1
		Montgomery	13
		Newton	1
		Orange	4
		Polk	2
		San Jacinto	2
		Trinity	1
		Tyler	1
		Walker	1
Texas	228		

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Ike Commodities Model

Generated By: Siemsen/Deatrick, LRL
0710 EDT 09/13/2008

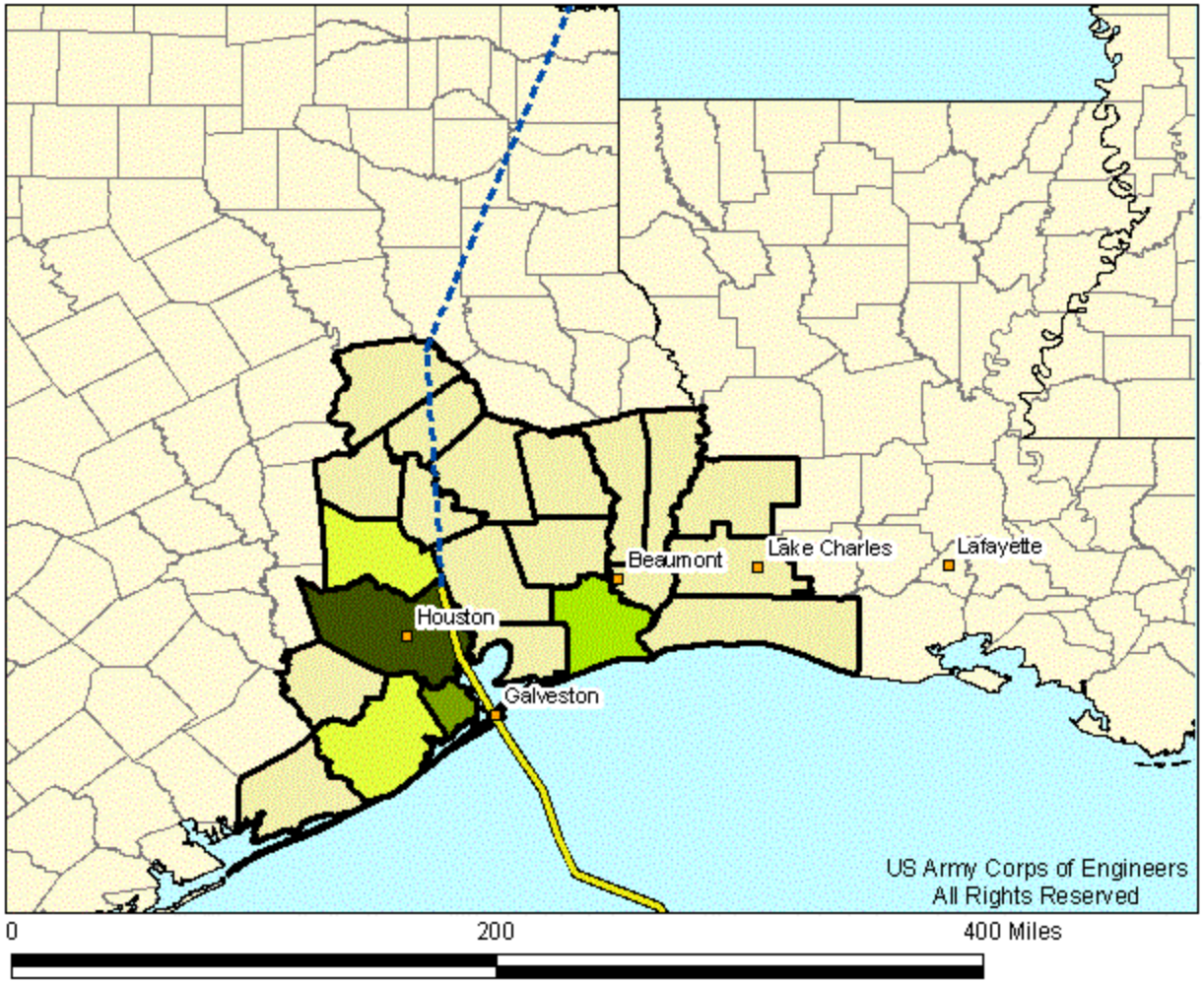
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Ike Temporary Roofing Model

Landfall Plus About 4 Hours

For Planning Purposes Only!



Post Landfall Temporary Roofing Model Results

Texas - 59,300
Louisiana - 600

Model results per County on following page

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC (0500 EDT 09/13/2008) forecast. Temporary roofing is based on 2% in CAT 1, 5% in CAT 2 and 7% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Ike Roofing Model

Generated By: Siemsen/Deatrick, LRL
0710 EDT 09/13/2008

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Ike Temporary Roofing Model

Landfall Plus About 4 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
Louisiana		Beauregard	< 100
		Calcasieu	600
		Cameron	< 100
Louisiana	600		
Texas		Brazoria	2,900
		Chambers	600
		Fort Bend	1,600
		Galveston	6,800
		Hardin	400
		Harris	36,400
		Houston	< 100
		Jasper	< 100
		Jefferson	4,300
		Liberty	1,200
		Matagorda	< 100
		Montgomery	2,900
		Newton	< 100
		Orange	1,100
		Polk	400
		San Jacinto	300
		Trinity	200
		Tyler	200
		Walker	< 100
Texas	59,300		

Temporary roofing is based on 2% in CAT 1, 5% in CAT 2 and 7% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Ike Roofing Model

Generated By: Siemsen/Deatrick, LRL
0710 EDT 09/13/2008

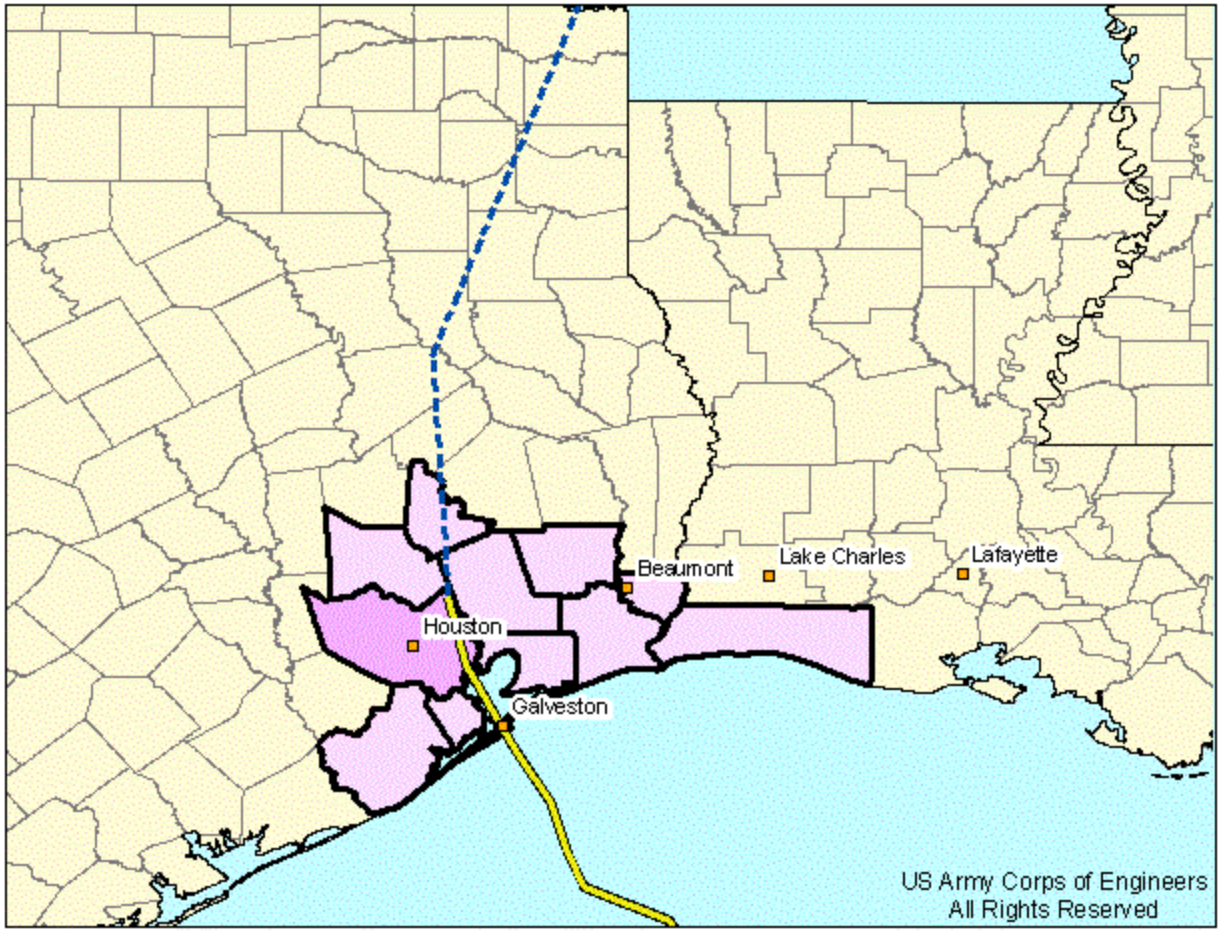
Sources:
HURREVAC
LRL-DEBRIS

Hurricane Ike Temporary Housing Model

Landfall Plus About 4 Hours

US Army Corps of Engineers

For Planning Purposes Only!



0 200 400 Miles

Post Landfall Temporary Housing Model Results

Texas - 8,000

Model results per County on following page

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC (0500 EDT 09/13/2008) forecast. Temporary housing is based on 1% in CAT 2 and 2% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Ike Housing Model	
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Sources: HURREVAC LRL-DEBRIS	Page 9 of 14

US Army Corps of Engineers

Hurricane Ike Temporary Housing Model

Landfall Plus About 4 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
Louisiana		Cameron	< 100
Louisiana			
Texas		Brazoria	400
		Chambers	200
		Galveston	1,800
		Hardin	< 100
		Harris	3,900
		Jefferson	900
		Liberty	300
		Montgomery	300
		Orange	200
		San Jacinto	< 100
Texas	8,000		

Temporary housing is based on 1% in CAT 2 and 2% in CAT 3.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Ike Housing Model

Generated By: Siemsen/Deatrick, LRL
0710 EDT 09/13/2008

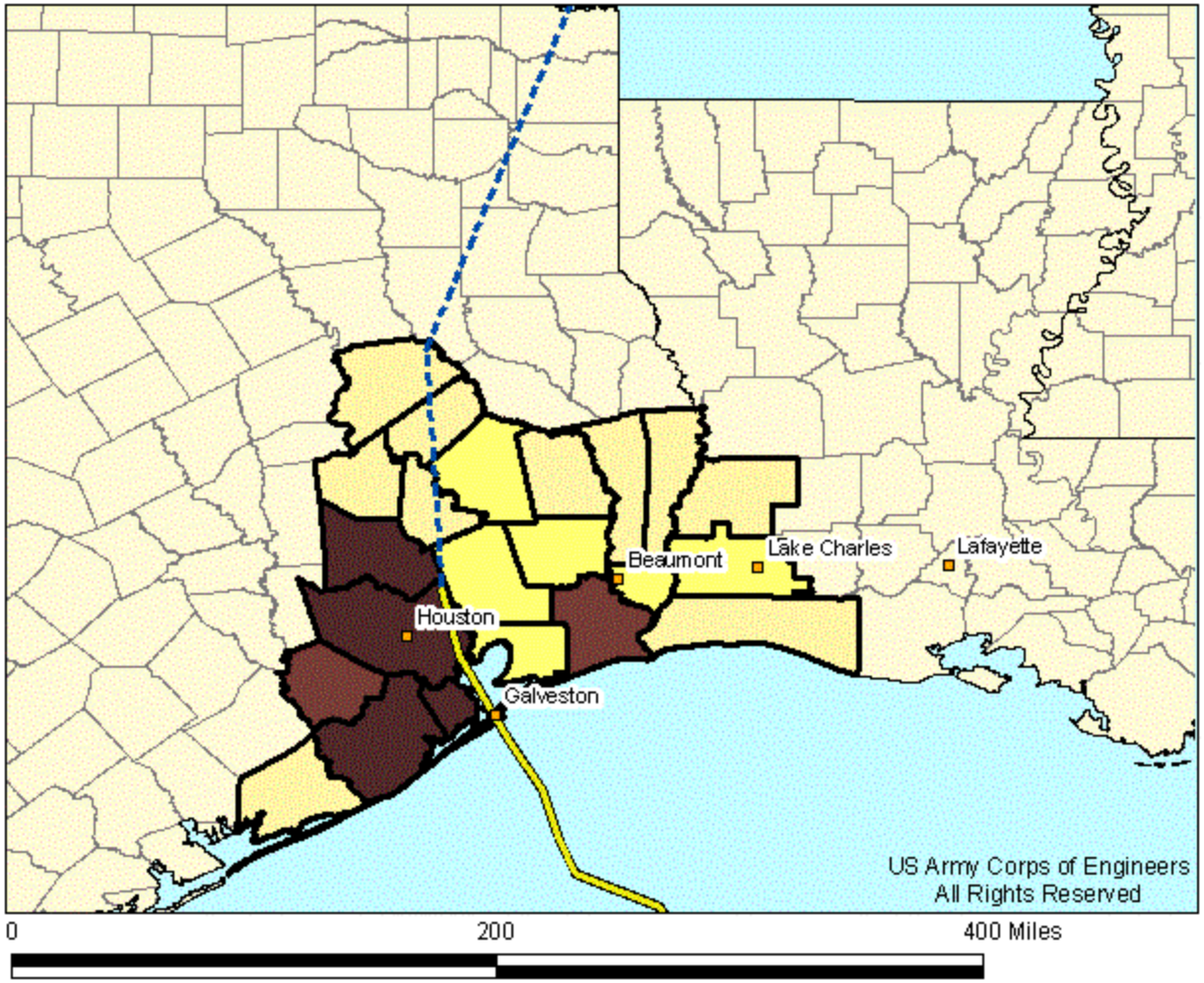
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Ike Population Model

Landfall Plus About 4 Hours

For Planning Purposes Only!



Post Landfall Results – Resident Population Within Hurricane Force Winds

Texas - 5,191,000
Louisiana - 82,000

Model results per County on following page

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC (0500 EDT 09/13/2008) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2007 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Ike Population Model	
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Sources: HURREVAC LRL-DEBRIS	Page 11 of 14

US Army Corps of Engineers

Hurricane Ike Population Model

Landfall Plus About 4 Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
Louisiana		Beauregard	< 1,000
		Calcasieu	77,000
		Cameron	5,000
Louisiana	82,000		
Texas		Brazoria	274,000
		Chambers	29,000
		Fort Bend	245,000
		Galveston	285,000
		Hardin	52,000
		Harris	3,470,000
		Houston	< 1,000
		Jasper	12,000
		Jefferson	243,000
		Liberty	76,000
		Matagorda	< 1,000
		Montgomery	306,000
		Newton	5,000
		Orange	83,000
		Polk	45,000
		San Jacinto	25,000
		Trinity	13,000
		Tyler	17,000
		Walker	11,000
Texas	5,191,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2007 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Ike Population Model

Generated By: Siemsen/Deatrick, LRL
0710 EDT 09/13/2008

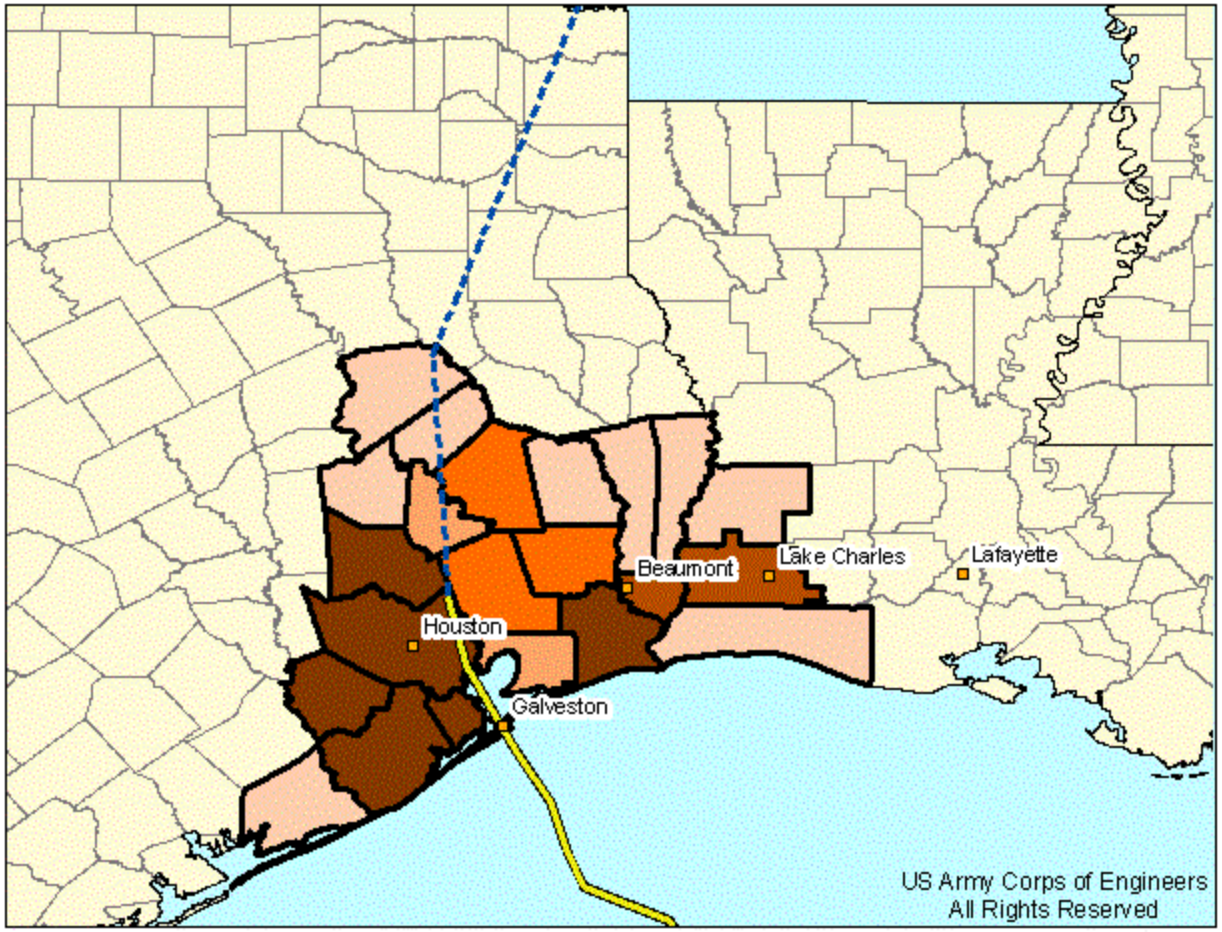
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Ike Households Model

Landfall Plus About 4 Hours

For Planning Purposes Only!



0 200 400 Miles

Post Landfall Results – Resident Households Within Hurricane Force Winds

Texas - 1,850,000
Louisiana - 31,000

Model results per County on following page

This model is based on a Category 3 storm making landfall near Galveston, TX.

Forecast Track
Historic Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 3 storm making landfall near Galveston, TX. These projections are based on information from the NHC (0500 EDT 09/13/2008) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2007 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Ike Households Model	
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Sources: HURREVAC LRL-DEBRIS	Page 13 of 14

US Army Corps of Engineers

Hurricane Ike Households Model

Landfall Plus About 4 Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
Louisiana		Beauregard	< 1,000
		Calcasieu	29,000
		Cameron	2,000
Louisiana	31,000		
Texas		Brazoria	93,000
		Chambers	11,000
		Fort Bend	79,000
		Galveston	108,000
		Hardin	20,000
		Harris	1,236,000
		Houston	< 1,000
		Jasper	5,000
		Jefferson	90,000
		Liberty	25,000
		Matagorda	< 1,000
		Montgomery	107,000
		Newton	2,000
		Orange	31,000
		Polk	17,000
		San Jacinto	10,000
		Trinity	6,000
		Tyler	7,000
		Walker	3,000
Texas	1,850,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2007 values.

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Hurricane Ike Households Model

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0710 EDT 09/13/2008

Sources:
HURREVAC
LRL-DEBRIS